What is claimed is

1. An optical module for transmitting and receiving optical signals comprising:

at least one transceiver unit;

a package box which is a box-shaped enclosure accommodating the transceiver unit; and

resin filling the package box;

wherein the transceiver unit includes

a die pad;

at least one platform body mounted on the die pad;

an optical fiber fixed on the platform body;

at least one receiving photo-diode which is mounted on the platform body and transforms optical signals received through the optical fiber into electric signals;

a light emitter mounted on the platform body;

a filter provided to divide the optical fiber at a position between the receiving photo-diode and the light emitter; and

a ferrule in which an end of the optical fiber is inserted.

2. An optical module in accordance with Claim 1, wherein the package box has a recess for projecting the ferrule, and the gap between the recess and the ferrule is filled with adhesive.

3. An optical module in accordance with Claim 2, wherein the adhesive is further applied on the upper part of the ferrule near about the recess.

4. A method of fabricating an optical module for transmitting and receiving optical signals comprising the steps of:

producing a box-shaped package box by pre-molding a lead frame;

mounting on a die pad of the lead frame an LE platform equipped at least with a light emitter for generating optical signals to be transmitted;

mounting on the die pad or the LE platform a PD platform equipped at least with an optical fiber, a receiving photo-diode for photoelectrically converting optical signals received through the optical fiber, a filter for separating received optical signals from transmitted optical signals, and a ferrule in which an end of the optical fiber is inserted,

charging resin into the package box accommodating the PD platform body and the LE platform body; and

curing the resin to encapsulate the PD platform and LE platform.

5. A method of fabricating an optical module in accordance with Claim 4,

wherein the step of pre-molding the lead frame includes a step of forming a recess in the package box for projecting the ferrule, and further comprises a step of injecting adhesive into a gap between the recess and the ferrule before the step of charging resin into the package box.

6. A method of fabricating an optical module in accordance with Claim 4 further comprising a step of:

performing a screening test of the LE platform mounted on the die pad before mounting the PD platform.